

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of forming a crystalline film, comprising:
forming setting a substrate in a chamber, the substrate having a thin film-
having on a surface on of the substrate, a glass portion of the wall of the chamber being
projected in a direction apart from the substrate, a window being provided at a top of the
surface of the thin film;
applying energy through the window to a surface layer of the thin film;
melting at least the surface layer of the thin film under a mixed gaseous
atmosphere by the applied energy; and
crystallizing at least a the surface layer of the thin film by applying energy
through a window that exhibits transparency to the energy to the surface of the thin film,
wherein a distance between the window and the thin film is more than about 20 mm, and at
least the surface layer of the thin film is melted by the applied energy and crystallized by
cooling solidification, the thin film being melted under a mixed gaseous atmosphere having a
total pressure of at least atmospheric pressure to reduce the scatter of melted thin film and to
make the distance sufficient for the reduced scatter, wherein unpaired bonding electrons on
the surface of the thin film during the cooling solidification are terminated by hydrogen
atoms in the mixed gaseous atmosphere, the mixed gaseous atmosphere containing a
hydrogen-containing gas and an inert gas.
2. (Previously Presented) The method of forming a crystalline film according
Claim 1, wherein the thin film is a semiconductor thin film.
3. (Cancelled)

4. (Currently Amended) The method of forming a crystalline film according to Claim 1, wherein ~~the step of crystallizing energy is carried out~~ applied to the thin film to crystallize it under atmospheric pressure.

5. (Previously Presented) The method of forming a crystalline film according to Claim 1, wherein at least the surface layer of the thin film is melted and crystallized in a mixed gaseous atmosphere that contains an inert gas and hydrogen molecules.

6. (Previously Presented) The method of forming a crystalline film according to Claim 4, wherein the mixed gaseous atmosphere contains an inert gas and a hydrogen halide.

7. (Previously Presented) The method of forming a crystalline film according to Claim 6, wherein the inert gas is a rare gas.

8. (Currently Amended) The method of forming a crystalline film according to Claim ~~6~~ 7, wherein the rare gas is argon.

9. (Currently Amended) The method of forming a crystalline film according to Claim 8, wherein ~~in the step of crystallizing,~~ at least the surface of the thin film is melted by supplying high energy to the thin film.

10. (Previously Presented) The method of forming a crystalline film according to Claim 9, wherein the form of the high energy is light.

11. (Previously Presented) The method of forming a crystalline film according to Claim 9, wherein the form of the high energy is a laser beam.

12. (Currently Amended) The method of forming a crystalline film, comprising:
forming setting a semiconductor substrate in a chamber, the substrate having a thin film having on a surface on a glass of the substrate, a window being provided near a side wall of the chamber;
applying energy through the window to a surface layer of the thin film with a normal direction of the thin film shifted by an angle from a direction of an irradiation path;

melting at least the surface layer of the thin film under a mixed gaseous atmosphere by the applied energy; and

~~crystallizing at least a the surface layer of the semiconductor thin film by applying energy through a window that exhibits transparency to the energy to the surface of the semiconductor thin film, wherein a distance between the window and the thin film is more than about 20 mm, and at least the surface layer of the semiconductor thin film is melted by the applied energy and crystallized by cooling solidification, the semiconductor thin film being melted under a mixed gaseous atmosphere having a total pressure of at least atmospheric pressure to reduce the scatter of melted thin film and to make the distance sufficient for the reduced scatter, the mixed gaseous atmosphere containing an inert gas, a gas containing the component element of the semiconductor thin film and hydrogen, wherein unpaired bonding electrons on the surface of the semiconductor thin film during the cooling solidification are terminated by hydrogen atoms in the mixed gaseous atmosphere.~~

13. (Currently Amended) The method of forming a crystalline film according to Claim 12, wherein the ~~step of crystallizing energy is carried out~~ applied to the thin film to crystallize it under atmospheric pressure.

14. (Currently Amended) The method of forming a crystalline film according to Claim 12, ~~wherein the gas containing the component element of the semiconductor thin film is a hydride of the component~~ further comprising:

discharging evaporated elements and scattered fine powder from an exhaust port, the exhaust port being provided at a position directly above the substrate.

15. (Currently Amended) The method of forming a crystalline film according to Claim 12, wherein the thin film is a semiconductor thin film ~~is a silicon thin film, and the gas containing the component element of the semiconductor thin film is silane.~~

16. (Currently Amended) The method of forming a crystalline film according to Claim 12 68, wherein ~~in the step of crystallizing,~~ at least the surface of the ~~semiconductor~~ thin film is melted by supplying high energy to the ~~semiconductor~~ thin film.

17. (Previously Presented) The method of forming a crystalline film according to Claim 16, wherein the form of the high energy is light.

18. (Previously Presented) The method of forming a crystalline film according to Claim 16, wherein the form of the high energy is a laser beam.

19-63. (Cancelled)

64. (New) The method of forming a crystalline film according to Claim 1, wherein the mixed gaseous atmosphere contains a hydrogen-containing gas and an inert gas.

65. (New) The method of forming a crystalline film according to Claim 12, wherein at least the surface layer of the thin film is melted and crystallized in a mixed gaseous atmosphere that contains an inert gas and hydrogen molecules.

66. (New) The method of forming a crystalline film according to Claim 12, wherein the mixed gaseous atmosphere contains an inert gas and a hydrogen halide.

67. (New) The method of forming a crystalline film according to Claim 66, wherein the inert gas is a rare gas.

68. (New) The method of forming a crystalline film according to Claim 67, wherein the rare gas is argon.

69. (New) The method of forming a crystalline film according to Claim 12, wherein a part of the energy enters the thin film, and another part of the energy is reflected from the thin film along a reflection path in the chamber, and course changing means changes a course of reflected energy to irradiate the thin film again with the reflected energy.